

Sequence Range: 1 to 4272

10	20	30	40	50	60
ATG TCC TAT GCG GCG TTC AGA GAT GGA GCG GCG GCG ATT ATG GAC CGA ACC CAA TAC GTT CAT	TAC AGG ATA CGC GCG AAG TCT CTA CTT GCG GCG GCG GCA TAC GTC CGA GGT ATT CAA GTA	N S Y A P S R D V R G P P M H R T Q Y V H			
70	80	90	100	110	120
TCC GCG TAT GAC GGT GCG GGT TCG AAC GCG GCG TCC GCG ACC ATC TCC GCG AAC CAG CTC CTC	AGC GCG ATA CTT GCA GCG GCG GCG ACC TTC GCG GCG AAC ACC TAG TAG AGA GCG CTT GTC GAC GAC	S P Y D R P G W N P R C I I S G N Q L L			
130	140	150	160	170	180
ATG CTC CAT GAG CAT GAG ATA CAC GCG GCG GCG ATC GCG GAC CCG ACC ACC GAG TCC AGC CGA	TAC GAC CTA CTC CTA CTC TAT CCG GCG GAA GAC TAG CCG GCG GCG TCC TCC GCG ACC TCC GCG	M L D E D E I H P L I I R D R R R E S S S R			
190	200	210	220	230	240
AAC AAA CTT CTG AGA GCG ACC GTC TCT GTC GCA GTC GAG GCG GCG GCG GCG GCG GCG GCG GCG	TTC TTT GAC GAC TCT CCG TCG TCG GAG AGA CAG GGT CAG CTC CCG GCG GCG GCG GCG GCG GCG GCG	N K L L R R T V S V P V E G R P H C E H E			
250	260	270	280	290	300
TAC GAC TTT GGT CCG TCC AGG AGG AAC AGT GTC CCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	ATC GAG AAC CCA GTC GTC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC	Y H L G R S R R X S V P G G X Q Y S M E A			
310	320	330	340	350	360
GCG GCG GGT GCG GCG TTC GCG GCG GCG TCC CAA GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	CGC GCG CCA GTC GCG AAG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	A P A A P P R P S O G F L S R R L K S S S			
370	380	390	400	410	420
AAA GGT ACA AAG TCA CAA CCG AAA GGT GAC GCG ACC AGC ACC ACC TTT CCA CAG ATC CTC GGT CCG	TTT GCA TTT TTT AGT GGT GCG TTT GAA CTC GCG TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC	X R T X S Q P X L D R T S S F R Q I L P R			
430	440	450	460	470	480
TTC CCA AGT GGT GAC CAT GAC CCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	AAG GGT TCA CCA CTC GCA CTT GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	F R S A D H D R A R L H Q S F R E S H S H			
490	500	510	520	530	540
GAG TCC CTC CTG AGT CCG AGC AGT GGT GGT GAG GCG CTC GAC CTC AAC CTC GAT GAA GAC TCC	CTC AGG GAC GAC TCA GCG TCC TCA CCA CCA CTC GCG GAC CTC GAG TTT GAC CTA CTT CTG AGC	E S L L S P S E A A E A L E L N L D E D S			
550	560	570	580	590	600
ATT ATC AAC CCA GTA CAC AGC TCC AGC CTC GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	TAA TAG TTC CGT CAT CTC TCG AGC TAG GAC CCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	I I K P V H S S I L G Q E P C F E V T T S			
610	620	630	640	650	660
TCT GCG ACA AAA TGT TTT GCG TCT CCG TCT CCA GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	AGA CCG TGT TTT ACA AAA CCG ACA GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	S G T K C F A C R S A A E R S A E R D K W I E N L			
670	680	690	700	710	720
CAG AGC GGT GTC AAA CCG AAC AAG GAC AAC AGC GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	GTC TCC CCA GAC TTT CCG TTT TTT CCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	Q R A V K P N K D N S R R V D N V L K L W			
730	740	750	760	770	780
ATC ATA GAA GGT CCA GAG CTG CCG CCG AAC AAG CCA TAT TAC TCC GAG TTA TCC CTG GAC GAC	TAC TAT CTT CCA CCG CTT GAC CCG GCG TTT TTT GGT ATA ATG ACC CTC AAT AGC CAC CTG CTG	I T F A R L D P M R K X F Y C H L C L D D			
790	800	810	820	830	840
ATC CTC TAT CCA CCG ACC ACT TCC AAG CCG CCG TCA CCG TCA GGA GAC ACT CTC TTT TGG GCG	TAC GAG ATA CCG TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC TCC	X L Y A R T T S K P R S A S G D T V F W G			

Figure 1A

820 830 910 920 930 940

GAC CAC TTC GAC TTT AAC AAC GTC GCG GGT GTC GCG GCG GTC GCG GTC CAT CAG TAC CGT GAC
 CTC GTG AAG CTC AAA TEG TEG CAC GGA GGA CAG GCG GCG GAC GCG CAC GTA GAC ATG GCA CTC
 E H F E F N N L P A V R A L R L H L Y R D>

950 960 970 980 990 1000

TCC GAC AAA AAC CCG AAC AAC CAC AAG GCA GCG GAC GTC GGT GTC GTC ALT GTT CCA GTC GCG
 AGC CCG TTT TTC GCG TTC TTC CCG TTT CCG CCG ATC CAA CCG GAC CAC TGA CAA GGT CAC CCG
 S D K K R K K U K A G Y V G L V T V P V A>

1010 1020 1030 1040 1050 1060 1070

ACC GTC GGT GCG GCG CAC TTC ACA CAG CAG TCG TAC CCG GTC ACC GTC CCA ACA GGA AGT GCG
 TCG GAC CCA CCG GCG CCG AAG TGT CCG GTC AGC AGC GCG CAC TCG GAC GGT TGT CCG TCA CCG
 T L A G R H F " E Q W Y P V T L P T G S G>

1080 1090 1100 1110 1120 1130

GCG GGT GCG GGT ATG GCG TCG GCG GGA GCA GCG GCG TCA GCG CCG CCG TCA GCG GCG AAA GCG
 CCG AGA CCG CCA TAC CCG AGC CCG CCG CCG CCG CCG AGT CCG CCG AGT CCG CCG CCG TTT CCG
 G S G G M G S G G G G G S G G S G S G K G>

1140 1150 1160 1170 1180 1190

AAA GGA GCG TGT CCG CCG GTC GCG CCG CCG AAC GCG CCG TAC CAG ACA ATG AGT ATC CCG CCG AGT
 TTT CCG CCG ACA CCA CCA CAC CCG GAC TTT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 K G C C P A V R L K A R Y Q T M S I L P M>

1200 1210 1220 1230 1240 1250 1260

GAG CTA TAT AAG GAG TTT CCA GAA TAC GTC ACC AAC CAC TAC GCG ATG CCG TGT GCG CCG CCG
 CTC GAT ATA TTC CCG AAA CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 E L Y K E F A E Y V T N H Y R M L C A V L>

1270 1280 1290 1300 1310 1320

GAG CCG CCG CCG AAT GTC AAG GCG AAG GAG GAG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 CTC GCG CCG GAG TTA CAG TTC CCG TTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 E P A C N V K G K D E V A S A L V H I L Q>

1330 1340 1350 1360 1370 1380

AGC ACA GCG AAG CCG AAG GAG TTC CCG TCA GAC AAG GCG ATG TCA GAG CTA GAC CCG TTC ATG
 TCG TGT CCG TTC CCG TTC CCG AAG GAA AGT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 S T C K A K D P L S D M A M S E V D R F M>

1390 1400 1410 1420 1430 1440

GAG CCG GAA CAC CTC AWA TTC CCG GAG AAC ACG CTC GCG ACT AAA CCG ATA GAA GAC TAT ATG
 CTC GCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 E R E H L I F R E N T L A T K A I E E Y M>

1450 1460 1470 1480 1490 1500 1510

AGA CTC ATT GCG CAG AAA TAC CTC AAG GAT GCG ATT GCG CAG TTC ATC CCG GGT CCG TAT GAA
 TCT GAC TAA CCG CTC TTT ATG GAG TTC CTA CCG TAA CCG CTC AAG TAG GCG CCA CAC ATA CTT
 R L I G Q K Y L K D A I G E F I H A L Y E>

1520 1530 1540 1550 1560 1570

TCT GAG GAG AAC TGT GAA GWA CAC CCG AAT AAG TCG ACA CCG TCG AGT CCG GCA GAG CAC CAG
 AGA CTC CCG TTC ACA CTT CAT CCG GCG TAG TTC ACG TGT CCG ACC 1CA CAC CCG CCG CCG CCG
 S E R N C E V D P I K C T A S S L A E H Q>

1580 1590 1600 1610 1620 1630

GCG AAC CCG CCG AAT TCG TGT GAG TCG CCG CCG TCG AAC CCG CCG CCG CCG CCG CCG CCG CCG
 CCG TTC GAC CCG TAC ACG ACA CTC AAC CCG GAC ACG TTC CCG CCG CCG CCG CCG CCG CCG CCG
 A N L R M C C E I A L C K V V N S H C V F>

1640 1650 1660 1670 1680 1690 1700

CGG AGG GAG CTG AAC GAG GTC TTT GCA TCA TCG CCG CCG CCG TGT GCA GAG CCG GCG CCG GAG
 GCG TCG GTC GAC TTC CTC CAC AAA CCG ACT ACC GCG GAC CCG ACA CCG CCG CCG CCG CCG CCG
 P R E L K E V P A S W R L P C A E R G R E>

1710 1720 1730 1740 1750 1760

GAC AAT GGT GAC AGG CTC ATC AGC GCG TCG CTC TTC CTC CCG TTC CTC TCG CCG GCG CCG ATC ATG
 CAG TAA CCA CTC TCG GAC TAG TCG CCG AGC GAG AAG GAC CCG AAG CAG ACG CCG CCG CCG TAC TAC
 D I A D R L I I C A S L F E R F L C P A I M>

Figure 1B

TCC ATC ACA GCA ATG CCC CTC AGC CAG ATC GGT GTC ACT A GTC CCC GGC
 AGG TAG TGT CGT GAG GAG GAG TGG GTC TAC CCA CAG TGA GAG GGC GGC
 S I T A A G M R L S Q N C V W T D G V F A
 2710 2720 2730 2740 2750 2760 2770
 CAG CAA CTG CCG ATC CCG CTT TCC TTC CAG CAG CCG CCG CCG CCG CCG CCG
 GTC GTT GAC GCG TAG GGA GAA ACC AAG GTC TTG CCA CAG AAG GTC AAC CCG CCG
 Q Q L R I P L S F Q N P L P H M A A D G P
 2780 2790 2800 2810 2820 2830
 GCG CCG CCA GCA GCG CAT GGA GGU AGC AGT CCG CAT CCG CCG CCG CCG CCG CCG
 CCC GCG GGT CGT CCG CTA CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 G P P A G H G C S S G H G P P S S H H H H
 2840 2850 2860 2870 2880 2890
 CAC CAC CAT CAC CAT CAC CCA GCG GGA GAA CCG CCA GCG CAC ACT TTT CCG CCG CCG
 CTC CTC CTA CTC CTA CTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 H H H H H H R C G S P P C D T F A P P H G
 2900 2910 2920 2930 2940 2950 2960
 TAT AGC AAG AGC GAG GAC CTC TCT ACG CCG GTC CCG AAG CCG CCG CCG CCG CCG
 ATA TCG TTC TCG CCG CTC GAG AGA TCT CCG CAG CCA TTC GCG GGA CCG CCG CCG CCG
 Y S K S B D L S T G V P K P P A A S I L H
 2970 2980 2990 3000 3010 3020
 AGC CAC AGC CAC ACT CAT GAG TTT CCA CCG TTT CCG ACT CAT TTT AGC CCG CCG CCG CCG
 TCG GTC TCG ATG TCA CTA CTC AAA CCG GCG AGA CCA TCA CTA AAA TCG CCG CCG CCG CCG
 S H S Y S D E F G P S G T D F W R R Q L S
 3030 3040 3050 3060 3070 3080
 CTT CAC GAC AAC CTA CAG CAC ATC CTC TCC CCG CCG CCG CCG CCG CCG CCG CCG
 GAA GTC CCG TTC CAT GCG GTC TCC CAG ACC CCG CCG CCG CCG CCG CCG CCG CCG
 L Q U N L Q H M L S P P Q V T I C P Q R P
 3090 3100 3110 3120 3130 3140 3150
 CCG CCG TCA CCG CCA GAA GCG AGC AGT GCG CCG AGT GGT CCG CCG CCG CCG CCG CCG
 CGA CCG ACT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 A P S G P G G S S G C G S G C G C G G G G G Q P
 3160 3170 3180 3190 3200 3210
 CCG CCG TCG CAG AGC GCG AAA TCT CAG CAG TCG ACA TCG AGT CCG CCG CAG AAA CCG CCG
 CGA CCG AAC GTC TCC CCG TTT AGA TCG GTC AAC TCT CAG TCA CCG CCG GTC TTT CAG CCG
 P P L O R C K S Q O L T V S A A Q K P R P
 3220 3230 3240 3250 3260 3270
 TCC AGC GCG AAC CTA TCG CAG TCC CCG GAA CCA AGT TAT GGT CCG CCG CCG CCG CCG CCG
 ACC TCG CCG TTC GAT AAC GTC AGG GCG CTT GGT TCA ATA TCA GGA CCG CCG CCG CCG CCG
 S S G N L L Q S P E W S Y G P A R P R Q Q
 3280 3290 3300 3310 3320 3330
 AGC CTC AGC AAA CAG GCG AGC ATT GCG GCG AGC CCG GCG AGT GGT CCG CCG CCG CCG CCG
 TCG CAG TCG TTT CTC CCG TCG TAA CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 S L S K E G S I G G S G C G S G G G G G G G G G G
 3340 3350 3360 3370 3380 3390 3400
 CTC AAG CCG TCC ATC ACC AAG CCG CAT TCT CAG ACT CCA TCC AGC CCG CCG CCG CCG CCG
 CAG TTC CCG AGG TAG TCG TTC CTC GTA AGG GTC TCA GGT ACC TCG CAG TCG CCG CCG CCG
 L K P S I T K Q H S Q T P S T L N P T M P
 3410 3420 3430 3440 3450 3460
 GCG TCG GAG CCG ACT CTA GCG TCG CTC TCC AAT AGC CCG CAG CTC TCG CCG CCG CCG CCG
 CCG ACC CTC GCG TCA CAT CCG ACC CAG AGC TCA TAC CCA CTC CAG CCG CCG CCG CCG CCG
 A S E R T V A W V G N M P R L S A D I E S
 3470 3480 3490 3500 3510 3520
 GCA CAC ATT CAG CCG GAA GAG TAC AAG CTC AAG CAG TAC TCG AAG TCG ATG CAG GAG AGC CCA
 CCG CTC TAA CTC CCG CTT CTC ATG TTC CAG TTC CAG TAC TCG TCG TCG TCG TCG TCG TCG
 A H I R R E E Y K L K E Y S K S M D E S R
 3530 3540 3550 3560 3570 3580 3590

Figure 1D

[illegible]

Figure 1E

Sequence Range: 1 to 4134

10	20	30	40	50	60
TAA GGC GGC CCA GGC CAA GGC GGC GGC GGC GGC GGC GGC GGC GGC GGC	ATT CCG GCG GGT GGG GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT	G C P P P R P R Q G A P V Q V P C P L L P			
70	80	90	100	110	120
ACC GGC ACC CTC TCC GGC GGC GGC GGC GGC GGC GGC GGC GGC GGC GGC	TGG CCG TCG GAG AGG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	T A S L S A A A L P A A F R C N T T W V			
130	140	150	160	170	180
GCT CGA CCA CCA ACA GTG TCC CCG GGC GGC AAA CAG TAC AGC ATG GAA GGC GGC GGC GGC	CGA GGT CTT CTT TCT CAC AGG GGC CCG CCG CCG CCG CCG CCG CCG CCG CCG	A R G R V S P G G K Q Y S H E A A P A A			
190	200	210	220	230	240
CCG TTC CCG CCG TCG CCA GGC TTC CTC AGC GGC AGC CTA AAA AGC ATG ATC AAA CCG ACA AAC	GGG AAG GCG GCG AGC GTC GTC GTC GTC GTC GTC GTC GTC GTC GTC GTC	P F R P S Q C F L S R R L K S S E K R T X			
260	270	280	290	300	310
TCA CAA CCG AAA CTT GAC CCG ACC AGC AGC CTT CCA CAG ATC CTC CCG CCG CCG CCG	AGT GTC GCG TTT GAA CTG CCG TCG TCG TCG TCG TCG TCG TCG TCG TCG	S Q P K L P R T S S F R Q I L P R F R S A			
320	330	340	350	360	370
GAC CAT GAC CCG GGC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	CTG GTC CTC GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG	D H D R A P L M Q S F K E S H S H E S L L			
380	390	400	410	420	430
AGT CCG ACC AGT GGT GGT GGC GGC CCG GGC GGC GGC GGC GGC GGC GGC	TCA GCG TCG TCA CCA CCA CTC CCG GAC CTC GAG TCG GAG CCA CCA CCA CCA	S P S S A A E A L E L N L D E D S I I K P			
450	460	470	480	490	500
GTA CAC AGC TCG ATC CTG GGC CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG	CAT GTC TCG AGC TAG CAC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	V H S S T L G Q E F C P E V T T S S C T K			
510	520	530	540	550	560
TCT TTT GGC TGT CCG TCG CCA GGC GAA ACC GAC AAA TCG ATT GAG AAT CTA GAG AGG GGT GTG	ACA AAT CCG ACA GCG AGA CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	C F A C R S A A E R U K W I E N L Q R A V			
570	580	590	600	610	620
AAA CCG AAC AAG GAC AAC AGC CCG CCG GCA GAT AAC CTG CTG AAA CTA TCG ACC ATA GAA GGT	TTT GCG TCG TTC CTC TTG TCG GCG CCG CCG CCG CCG CCG CCG CCG CCG	K P N K D N S R R V D N V L K L W I I E E A			
640	650	660	670	680	690
CGA GAG CTG CCG CCG AAG AAG CCA TAT TAC TCG GAG TTA TCG CTC GAC GAC ATG CTC TAC GCA	GCT CTC GAC CCG GCG TTC TTC GGT ATA AGC AGC CTC NAT ACC GAC CTC GAC TAC GAC ATA CTT	R E L P P K K R Y Y C E L C L D D M I Y A			
700	710	720	730	740	750
CGC ACC ACT TCG AAG CCG CCG TCA CCG TCA CCA GAC ACT CTC TTT TCG GGC GAG CAC TTC GAC	GCG TCG TGA AGG TTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	R T T S K P R S A S G D T V F W G E H F E			
760	770	780	790	800	810
TTT AAC AAC CTG CCG GCG CTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	AAA TTT TCG GAC CCA CAG GCG CCG GAC CCG GAC CCG CCG CCG CCG CCG	F H N L T A V R A L R L H L Y R D S D X K			
820	830	840	850	860	870
CGC AAG AAG GAC AAG GCA GGC TAC GTT CCG CTC GTG ACT GTT CCA CTC GGC ACC CTC GGT GGC	GCG TTC TTC CTC TTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG	R R K D K A G Y V G L V T V P V A T L A G			

Figure 2A

GGC CAT TGA GGG GGC CAT GGT CAA GGT TCC TCC CAT CAC C GTC CAC CAT CAC
 CCG GTA GTT CCC CCG GTA CTA GGT GGA AGG AGG GTA GTG G GTC GTG GTG GTA GTG
 G H C G S S H H G P P S S H H E H H R R H H
 2710 2720 2730 2740 2750 2760 2770
 CAT CAC CGA GGG GGA GGA CCG CCA CCG GAC ACT TTT GCG CCG TTC CAT GGC TAT AGC AGC AGC
 GTA GTG GGT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 H H R G C E P P G D T F A P F E G Y S K S
 2780 2790 2800 2810 2820 2830
 GAG GAC CTC TCT ACA GCG GCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 CTC CTC CAC AGA TGT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 Z D L S T G V P K P P A A S I L H S H S S V
 2840 2850 2860 2870 2880 2890
 ACT GAT GAG TTT CCA CCG TCT GAT ACT GAT CTT ACC CCG CCG CCG CCG CCG CCG CCG CCG CCG
 TCA CCA CTC AAA CCG GCG AGA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA
 S D S F G P S G V D F T R R Q L S L Q D N
 2900 2910 2920 2930 2940 2950 2960
 CTA CAC CAC AGC CCG TCC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 GAT GTC GTG TAC GAG AGG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG
 L Q H M L S P P Q I T I C P Q R P A P S S S
 2970 2980 2990 3000 3010 3020
 CCA GGA GCG GCG AGT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 GGT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 F G G G S G G G S G
 3030 3040 3050 3060 3070 3080
 AGG CCG AAA TCT CAG CAG TTG ACA GCG AGT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 CCG CCG TTT AGA GTC GTC AAC TGT CAC TCA CCA CCG GTC TTT GCG CCG CCG CCG CCG CCG CCG CCG
 R G K S Q V L T V S A A Q K P R F S S C N
 3090 3100 3110 3120 3130 3140 3150
 CTA TTG CAC TCC CCG GAA CCA AGT TAT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 GAT AAC GTC AGG GAG CCG GGT TCA ATA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA
 L L Q S P E P S V G P A R P R Q Q S L S K
 3160 3170 3180 3190 3200 3210
 GAG CCG AGC AGT CCG CCG AGC CCG GCG AGC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 CTC CCG TCC TAA CCG CCG TCC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 E G S I G G S G G S G
 3220 3230 3240 3250 3260 3270
 ATT ACC AAC CAG CAG TCC CCG ACT CCA TCC AGG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 TAG TCC TTC GTC GTA AGG CTC TCA CCG AGG TCC CAG TTC CCG CCG CCG CCG CCG CCG CCG CCG CCG
 I E K Q H S Q T P S T L N P T M P A S E R
 3280 3290 3300 3310 3320 3330
 ACT GTA GCG TCG GTG TCC AAG ATG CCG CAC CTG TCC CCG CAC ATT GAG AGT CCA CAC ATT CAG
 TGA CAT CCG ACC CAC AGG TCA TAC GGA GTG GAC AGC CCA CTC TAG CTC TCA CCG CCG CCG CCG CCG
 V A W V S N M P H L S A D I E S A H I R
 3340 3350 3360 3370 3380 3390 3400
 CGT GAA GAG TAC AAG CTG AAG GAG TAC TCC AAG TCC ATG GAC GAG ACC CCA CTC GAG AGG GTC
 CCG
 R E E Y K L X E Y S K S M D E S R L D R V
 3410 3420 3430 3440 3450 3460
 AAG CAG TAC GAG GAG GAG ATC CAG TCA CTG AAG GAA AAG CTA CAC ATG TCC AAC CAG AAG CCG
 TTC CTC ATG CTC CTC CTC TAG CTC AGT CAG TCC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 K E Y E E R T H S L K E R L H M S N R K L
 3470 3480 3490 3500 3510 3520
 GAA GAG TAC GAG CCG ACC CTC CTC TCC CAG GAA GAG CAC ACC ACC AAG ATC CTC ATG CAG TAC
 CTT CTC ATG CTC CCG ACC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 E E Y E R R L L S O E E Q T S K I L M Q Y
 3530 3540 3550 3560 3570 3580 3590

Figure 2D

CAG	GCC	CCC	CTG	GAG	CAG	AGC	GAG	AAG	GCG	TTC	AGG	CAG	CAG	CAG	GTG	GAG	AAG	GAC	TCC	CAG																					
GTT	GGG	CCG	GAC	CTC	GTC	TGC	CTC	TTC	GGG	AAC	TGC	GTG	GTG	GTG	GAC	GTG	TTC	CTG	AGG	GTC																					
Q	X	R	L	E	Q	S	E	X	R	L	R	Q	Q	Q	V	E	K	D	S	Q>																					
3600						3610						3620						3630						3640						3650											
AAC	AAG	AGC	AAC	AAT	GGC	AGG	CTG	AAG	CTC	GTG	GAG	GAG	GAG	CTG	GGC	GGG	GAC	GAC	CCC	CCC																					
TAG	TTC	TGC	TAG	TAA	CCG	TCC	GAC	TAC	GAC	CAC	CTC	CTC	CTC	GAC	GCC	GGC	CTC	GTG	GGG	GGG																					
I	K	S	Z	J	G	R	L	M	L	V	Z	E	E	Z	R	R	D	H	F	A>																					
3660						3670						3680						3690						3700						3710											
ATG	GCT	GAG	CCG	CTG	CCG	GAA	GGC	AAG	AAG	AGG	CTC	CTC	GAC	GCT	CAG	AGA	GGC	AGC	TTC	CCC																					
TAC	CGA	CTC	GGC	GAC	GGA	CTT	GGG	TTC	TTC	TCC	GAC	GAG	CTG	CGA	GTG	TCT	CTC	TCC	AAC	GGG																					
M	A	E	P	L	P	E	P	K	K	K	L	L	H	G	A	Q	R	G	S	P>																					
3720						3730						3740						3750						3760						3770						3780					
CGT	TCC	CTC	CAA	CAA	ACC	GGC	GTG	TCA	TCC	TCC	CCC	CAC	CTT	CCA	ACC	GGC	TCC	CCC	CCC	CAG																					
CGA	ACC	CAG	GTA	GTT	TGG	GGG	CAC	ACT	GGC	ACC	GGC	GTG	GAA	CGT	TCC	AGG	ACT	GGG	GGG	CTC																					
P	W	V	Q	Q	T	R	V	*	R	W	P	H	L	G	T	A	W	P	F	Q>																					
3790						3800						3810						3820						3830						3840											
GGC	GAC	GGC	GGC	GAC	GGC	GGC	TCC	AGA	TCA	CAG	AGA	AGC	GGC	AGT	TCC	GGG	ACA	CCC	CAG	ACC																					
GGG	GTG	GGG	GGG	GTG	GGG	GGG	ACC	TCC	AGT	GTG	TCC	TCC	GGC	TCA	AGG	CGT	TCT	GGC	GTG	TGG																					
P	H	P	P	H	P	G	C	R	S	Q	R	T	A	S	E	G	T	P	Q	">																					
3850						3860						3870						3880						3890						3900											
ACT	AGC	CGA	CCC	AGC	ATC	ACA	GAC	CTC	CTT	CCC	TCT	CCA	CCC	TAC	CCC	GGC	CCA	CCC	AGC	GTC																					
TAA	TTC	GAT	GGG	TCC	TAC	TCT	CTC	CAG	GAA	GGG	ACA	CGT	GGG	AGG	GGG	GGG	GGT	GGG	TCC	CAC																					
T	B	P	D	S	I	T	D	L	L	P	C	A	P	Y	Z	G	P	P	S	V>																					
3910						3920						3930						3940						3950						3960											
ACA	GAC	CTC	CTT	CCC	AGT	GCA	CCC	GAC	CTT	CCA	ACA	TCA	CCA	ACC	ACC	AGG	ACT	CCA	CTT	CAC																					
TGT	CTG	GAG	GAA	GGG	TCA	CGT	GGG	CTG	GAA	CGT	TCT	ACT	GGT	TGG	TGG	TCC	TGA	CGT	GCA	GTG																					
T	B	L	I	P	S	A	P	D	P	S	T	S	P	T	T	R	T	G	R	IL>																					
3970						3980						3990						4000						4010						4020						4030					
CAA	GGC	ACA	GGG	GGA	CTG	TCC	CCC	TCA	ACG	CTT	CTT	TCC	GGC	AGT	GAT	CTG	TCA	ACC	CCA	CTG																					
GTT	CCC	TCT	GGC	CGT	AAC	ACA	GGG	GGG	TGC	GGA	GGA	ACC	GGG	AGT	GTA	GAC	AGT	TCC	GCT	GAC																					
Q	G	T	A	G	L	S	P	L	T	P	P	W	G	T	H	L	S	T	P	L>																					
4040						4050						4060						4070						4080						4090											
CTC	CAE	TCC	AGG	AGC	CAC	AGT	GGG	ACC	CTC	AGC	TCC	CTT	CTC	ACC	CCA	GGA	CAC	CAC	CTA	CCC																					
GAG	GTA	ACC	TCC	TCC	CTC	TCA	CCC	TCC	GAG	TCC	ACC	GGG	GAG	TCC	GCT	CGT	CTC	CTG	GAT	GGG																					
L	H	S	R	R																																					

Figure 2E

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

Figure 3A

890			900			910			920			930			940		
QAG	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
QAG	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
Q	T	X	S	T	T	T	T	T	T	T	T	T	T	T	T	T	
950			960			970			980			990			1000		
TAC	AGC	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
TAC	AGC	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
Y	R	X	L	C	A	V	L	X	P	A	L	N	V	X	G	K	
1010			1020			1030			1040			1050			1060		
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
S	A	L	V	H	L	Q	X	T	G	R	A	K	B	F	L	G	
1080			1090			1100			1110			1120			1130		
ATG	ACB	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
ATG	ACB	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
M	S	E	V	U	A	F	X	E	R	E	H	L	F	R	E	N	
1140			1150			1160			1170			1180			1190		
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
T	R	X	L	E	H	Y	H	R	L	C	G	Q	K	V	L	K	
1200			1210			1220			1230			1240			1250		
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
E	F	E	R	A	L	V	E	S	E	H	N	A	F	V	D	P	
1270			1280			1290			1300			1310			1320		
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
A	S	E	L	A	E	H	Q	A	V	H	X	C	E	C	E	R	
1330			1340			1350			1360			1370			1380		
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
V	V	N	S	H	C	V	F	P	R	E	L	X	E	V	F	A	
1390			1400			1410			1420			1430			1440		
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
AGT	ACB	ATG	AGT	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	ATG	
R	C	A	E	R	G	R	E	D	L	A	D	R	A	L	S	A	
1450			1460			1470			1480			1490					

Figure 3B

1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560	3570	3580	3590	3600	3610	3620	3630	3640	3650	3660	3670	3680	3690	3700	3710	3720	3730	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240	4250	4260	4270	4280	4290	4300	4310	4320	4330	4340	4350	4360	4370	4380	4390	4400	4410	4420	4430	4440	4450	4460	4470	4480	4490	4500	4510	4520	4530	4540	4550	4560	4570	4580	4590	4600	4610	4620	4630	4640	4650	4660	4670	4680	4690	4700	4710	4720	4730	4740	4750	4760	4770	4780	4790	4800	4810	4820	4830	4840	4850	4860	4870	4880	4890	4900	4910	4920	4930	4940	4950	4960	4970	4980	4990	5000	5010	5020	5030	5040	5050	5060	5070	5080	5090	5100	5110	5120	5130	5140	5150	5160	5170	5180	5190	5200	5210	5220	5230	5240	5250	5260	5270	5280	5290	5300	5310	5320	5330	5340	5350	5360	5370	5380	5390	5400	5410	5420	5430	5440	5450	5460	5470	5480	5490	5500	5510	5520	5530	5540	5550	5560	5570	5580	5590	5600	5610	5620	5630	5640	5650	5660	5670	5680	5690	5700	5710	5720	5730	5740	5750	5760	5770	5780	5790	5800	5810	5820	5830	5840	5850	5860	5870	5880	5890	5900	5910	5920	5930	5940	5950	5960	5970	5980	5990	6000	6010	6020	6030	6040	6050	6060	6070	6080	6090	6100	6110	6120	6130	6140	6150	6160	6170	6180	6190	6200	6210	6220	6230	6240	6250	6260	6270	6280	6290	6300
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Figure 3C

THE UNIVERSITY OF CHICAGO

Figure 3D

1720	3770	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840
1730	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890
1740	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900
1750	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910
1760	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920
1770	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930
1780	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940
1790	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950
1800	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960
1810	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970
1820	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980
1830	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990
1840	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000
1850	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010
1860	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020
1870	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030
1880	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040
1890	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050
1900	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060
1910	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070
1920	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080
1930	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090
1940	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100
1950	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110
1960	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120
1970	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130
1980	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140
1990	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150
2000	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160
2010	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	41	

Figure 3E

1	MQSFKESSHE	SPSSAAEALNLDDESIKPVHSSILQCEFCY	TSSGTXCFC	60
61	RSAAERDKWIE	IAVKPKNKNSRRVDNVLKWTIEARELPKKA	ICLDDMLYAR	120
121	TTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHL	YRDSCKKXKDKAGYVGLVTVFVATL		180
181	AGRHFTEQWYFVTLPTGSGGSGGSGGSGGSGGSGG	SGGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGG	SGGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGG	240
241	MELYKEFAEYVTNHVRLCAVLEPALNVKGRKEEVA	SALVHLLQSTGKAKDFLSDMAMSEV		300
301	DRFMEREHLIFRENTLATKATIEYMRLIGQKYLKDA	IGEFIRALYESEENCEVDPIKCTA		360
361	SSLAHQANLRMCCELALCKVNSHCVFPRELKEVFAS	WRRLCAERGREDIAADRLISASL		420
421	FLRFLCPALMSPSLFGLMQEYFDEQTSRTLTTLIAK	VIQNLANSKFTSKEDFLGFMNEFL		480
481	ELNGSMQQLYEISNLDTLTNSSSFEYIDLGRELSTL	HALLWEVLPQLSKEALLKLG?		540
541	LPRLLSDISTALRNPNIQROPSPRQSEARSOQPMVL	RGPSEAEMQGYMMDLNSSIDLQSF		600
601	ARGLNSSMDMAQLPSPTKEKPPPPPGGGKDLFYVSR	PPARSSPAYCTSSSDITEFEQK		660
661	MLSVNKSVMLODQDGPGRRLNSSSVSNLAAGDLLHSS	QASLTAALGLRPAAPAGRLSQ		720
721	GGSSSITAAGMRLSQMGVTTDGVPAQQLRIPLSFQNP	LFHMAADGPGPPAGHGGSSGHG?		780
781	PSSHMHMHMHMHHRGGEPPGDTFAPFEGYSKSEDLST	GVKPPAASILHSHSYSDEFGPS		840
841	GTDFTRQLSLQDNLQFMLSPPQITIGPQRPAZSGP	GGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGG	SGGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGG	900
901	QQLTVSAAQKPRSSGNLLQSPSPSYGPAPPCQSLSK	EGSIGSGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGG	SGGSGGSGGSGGSGGSGGSGGSGGSGGSGGSGG	960
961	TKQHSQTPSTLNFTMPASERTVAVVSNMPLSADIESA	HIEREYKLYSKSMDESRD		1020
1021	RVKYEHEEIHSLKERLHMSNRKLEETRRLLSQEBQTS	KILMQVQARLEQSEKRLRCCQV		1080
1081	EXDSQIKSIIGRLMLVEELRRDHAPAAEPLEPKRLLD	AQRGSFPFWVQQTRV		1135

Figure 4A

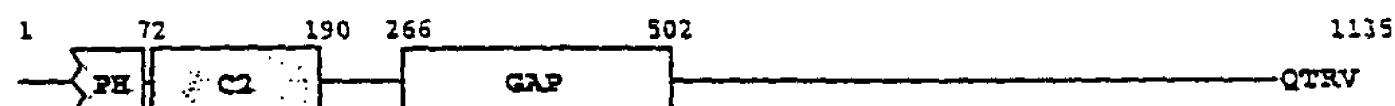


Figure 4B

* * *			
GAPSYN	286	GKAKDFLSDMAMSEVD	DRFMERE-HLIFRENTLATKATIEYMRLIGQKYLKDAIGEFIRALYE 347
rn GAP	755	KLESLLCTLNDREIS--	MEDEATTLFRATTLASTLMEQYKATATQFVHALKDSILKIME 815
hs NFL	1251	HLLYQLLWNMF	SKVE--LADSMQTLFRGNLSASKIMTFCFKVYGATYLQKLL-DPLLRIVI 1311
GAPSYN	348	SEE-----NCEVDPIKCTAS-	SLAEHQANLRMCCELALCKVNSHCVFPRELKEVFASWRLR 403
rn GAP	816	SKQ-----SCELSPSKLEQ	VEDVNTNLHLLSILSELVEKIFMASEILPPTLRYTYGCLQKS 872
hs NFL	1312	TSSDWQHVSFEVDPT	RLPSESLEENQRNLLQMTKFFHAISSSSSEFP9QLASVCHCLYQV 1372
** *			
GAPSYN	404	CAER--GREDIADRLISASL	FLRFLCPALMSPSLFGLMQEYFDEQTSRTLTTLIAKVIQNLAN 463
rn GAP	873	VQHKWPTNMTMRTRVVSG	FVPLALICPAILNPRMFNIISDSFSPIAARTTLVAKSVQNLAN 934
hs NFL	1373	VSQRFPQNSIG---	AVGSSAMPLRFINPAIVSPYEAGILDKGPPRIERGLKLSKILQSIAN 1430
**			
GAPSYN	464	PSKFTSKEDFLGFMNEFL	ELE-WGSMQQLYEISNLDTLT 502
rn GAP	935	LVEFGAKEPYMEGVNPF	IKSN-KRMIMFLDELGNVPELP 973
hs NFL	1431	EVLP-TKEHMRPFNDFV	KSNFDAARRFLDIASDCPTSD 1469

Figure 4C

Pleckstrin Homology(PH) Domain Alignment

SynGAP-a	162	FKESHSHESL	LSPSSAA...	.....EALEL	NLD.....	.....EDSIK	19
Hs p120	471	FYKNIVKKG	LLKKGKG...	..KRWNLYF	ILEGSDAQLI	YFESEKRATK	51
Dm GAP1	759	PVLLKEGEG	MTKYPTSRKR	FGROFKQRHF	RLTT..HSLS	YAKSK..GKQ	80
Hs Plec	1	MEPKRIREG	LVKKGSV...	.FNTWKPMWV	VLLD..DGIE	FYKKK.SDNS	4

SynGAP-a	193	P.....	.....VHSSIL	GQ.EFCFEVT	TSSGTKC...	...FACRSAAE	22
Hs p120	516	PKGLIDLSVC	SVYVVHDSLF	GR.PNCFQIV	VQHFSEEHYI	FYFAGETPEQ	56
Dm GAP1	805	PICDIPLQEI	ASVEQLKDKS	FKMQNCFKIV	HNDRS.....	LIVQTTNCVE	84
Hs Plec	45	PKGMIPLKGS	TLTSPCQDFG	KR.MFVFKIT	TTKQQ.....D	HFFQAALFEE	8

SynGAP-a	224	RDKWLENLQR	AVKPNKDNSR	243
Hs p120	565	AEDWMKGLQA	FCNLRKSSPG	584
Dm GAP1	850	EREWFLLHK	ICLMNSIRMQ	869
Hs Plec	89	RDWVRDINK	AIKCIEGGQK	108

Figure 5

C2 Domain Alignment

SynGAP-a	245	..VDNVLKLW	..ITEARELP	....PKKRY.	YCELCL....	DDMLYARTTS	281
Hs p120	592	..QVSSLVLH	..IEEAHKLP	...VKHFTNP	YCNLYL....	NSVQVAKTH.	629
Rn Syt II	151	DYDFQANQLT	VGVLQAAELP	ALDMGGTSDP	YVKVFLLPD.	.KKKKYETKV	198
Bt Rab 3A	411	LYDQDNSSLH	CTIHKAKGLK	PMDSNGLADP	YVKLHLLPGA	SKSNKLRTKT	460
SynGAP-a	282	KPRSASGDTV	FWGEHFEFNN	LP.AVRALRL	HLYRD.SDKK	RKKDKAGYVG	329
Hs p120	630	...AREGQNP	VWSEEFVPDD	LPPDINRFEI	TL....SNKT	.KSKDPDIL	671
Rn Syt II	199	...HRKTLNP	AFNETFTFKV	..PYQELGGK	TLVMAIYDFD	RF.SKHDIIG	242
Bt Rab 3A	461	...LRNTRNP	IWNETLVYHG	I.TDEDMQPK	TLRISVCDED	KF.GHNEFIG	505
SynGAP-a	330	LVTVPVAT..	.....	.LAGRHFTEQ	WY.PVT.LPT		354
Hs p120	672	FMRCQLSR..	.....	.LQKGHATDE	WFLSSSHIPL		698
Rn Syt II	243	EVKVPMNTVD	.....	.L..GQPIEE	WRDLQG..G.		266
Bt Rab 3A	506	ETRFSLKKLK	PNQRK.NFNI	CL..ERVIPM	KRAGTTGSAR		542

Figure 6

Figure 7A

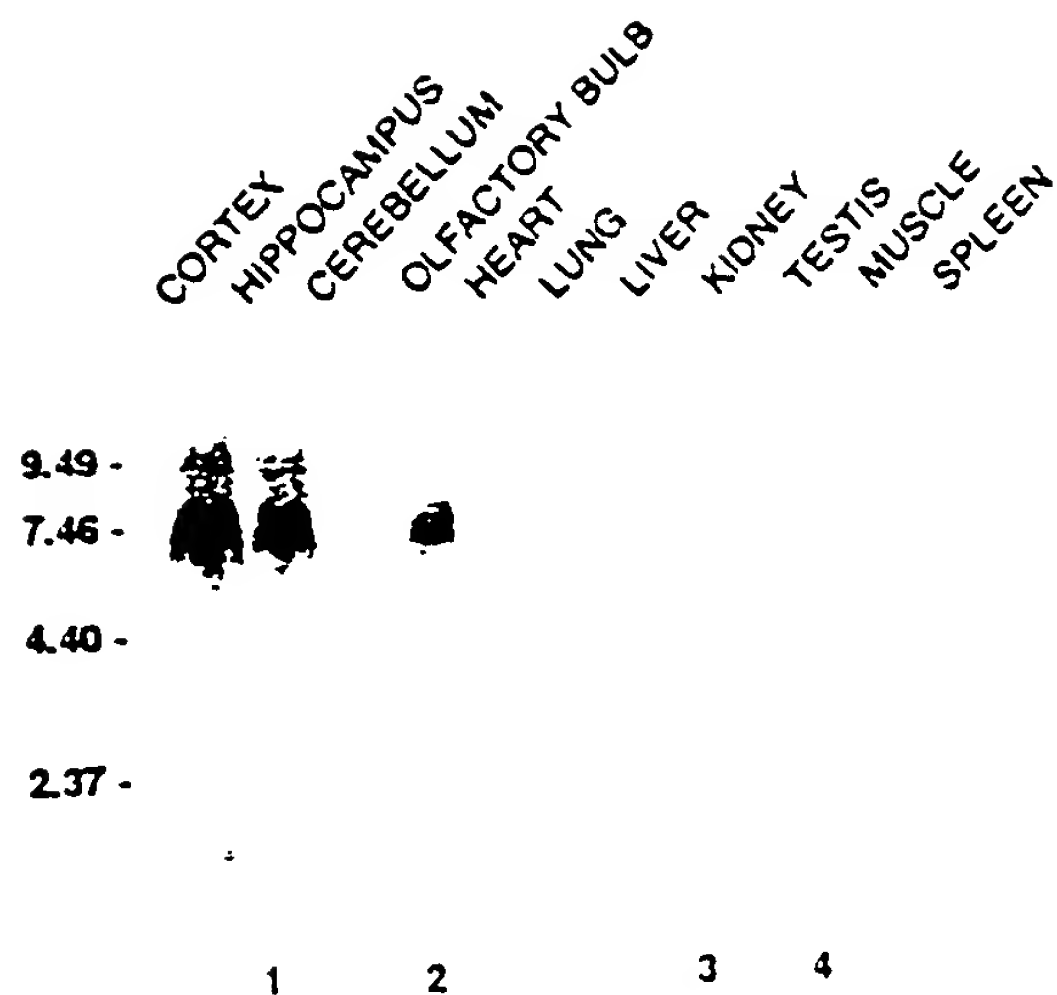


Figure 7B



Figure 7C

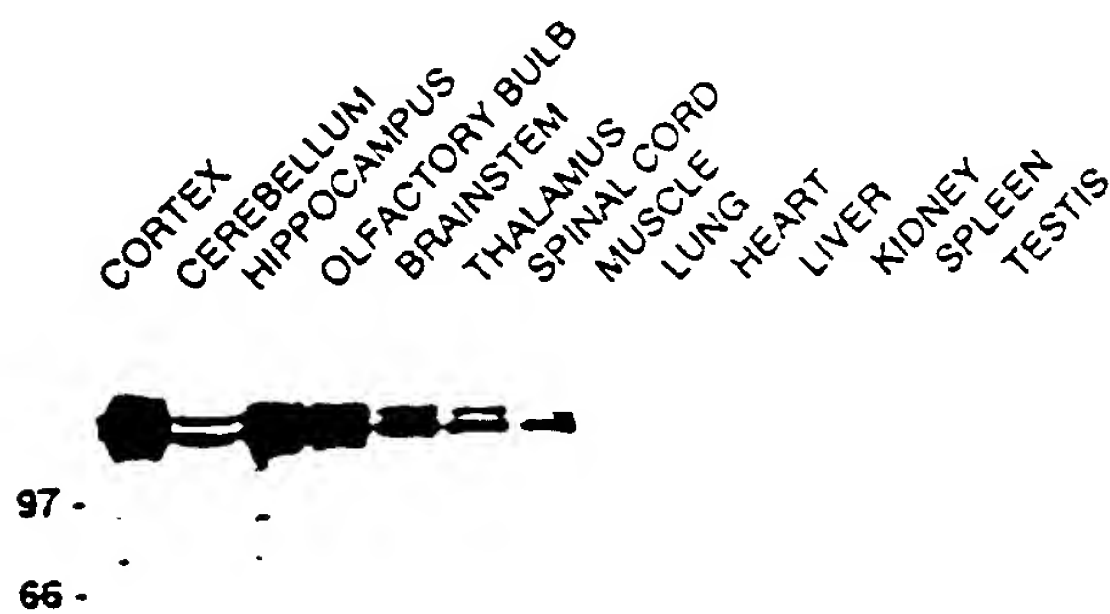
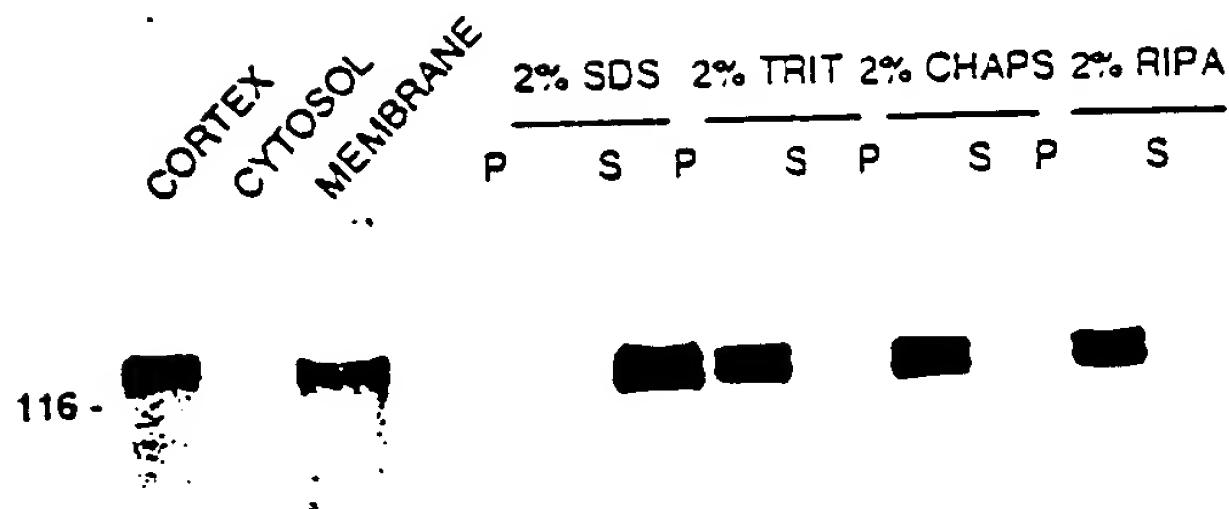


Figure 7D



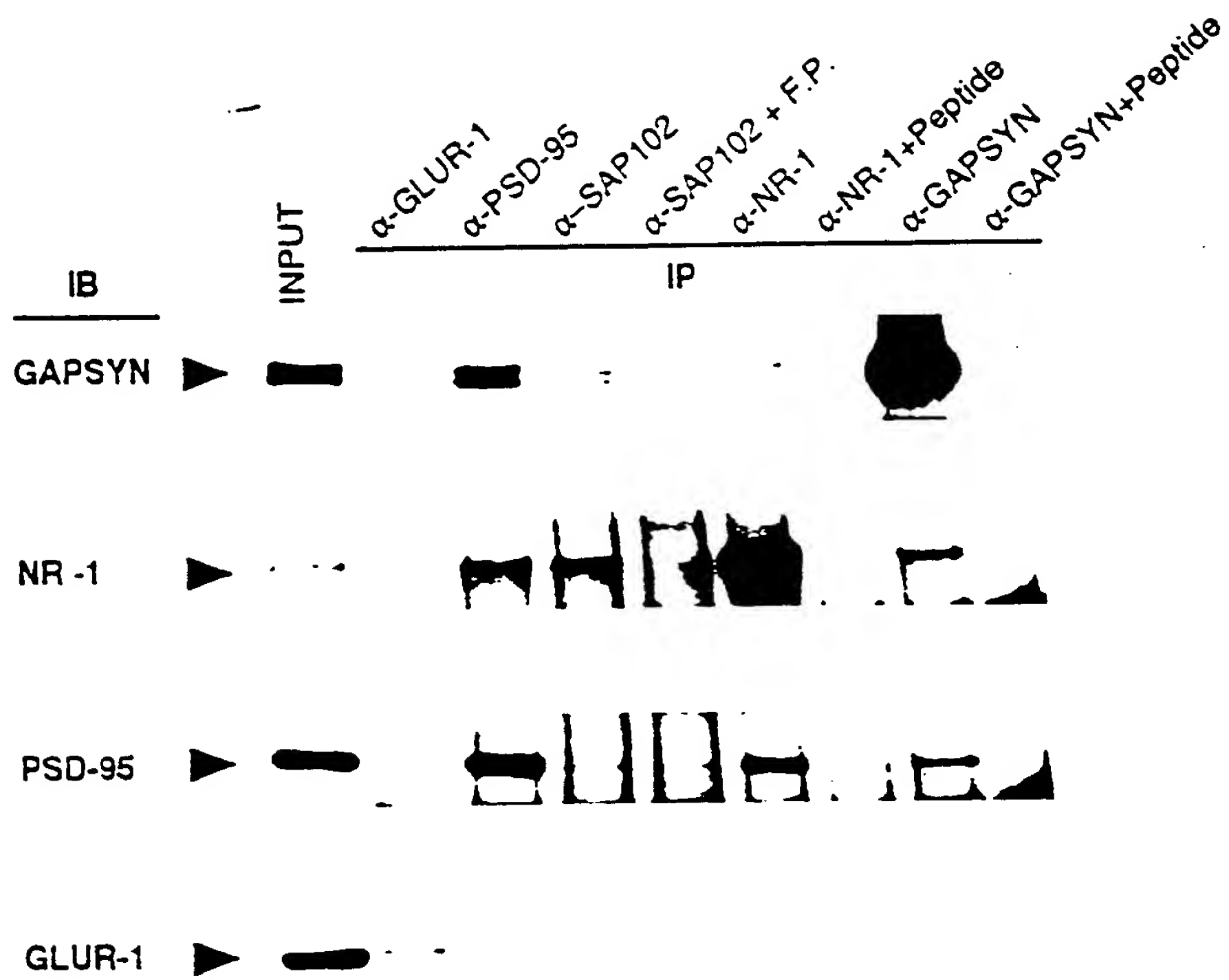


Figure 8

GAPSYN



Figure 9A

GAPSYN



Figure 9B

SYNAPTOPHYSIN



Figure 9C

OVERLAP



Figure 9D

GAPSYN (BLOCK)



Figure 9E

SYNAPTOPHYSIN



Figure 9F

[illegible]

Figure 10B



Figure 10C



Figure 10D



Figure 10E



Figure 10F

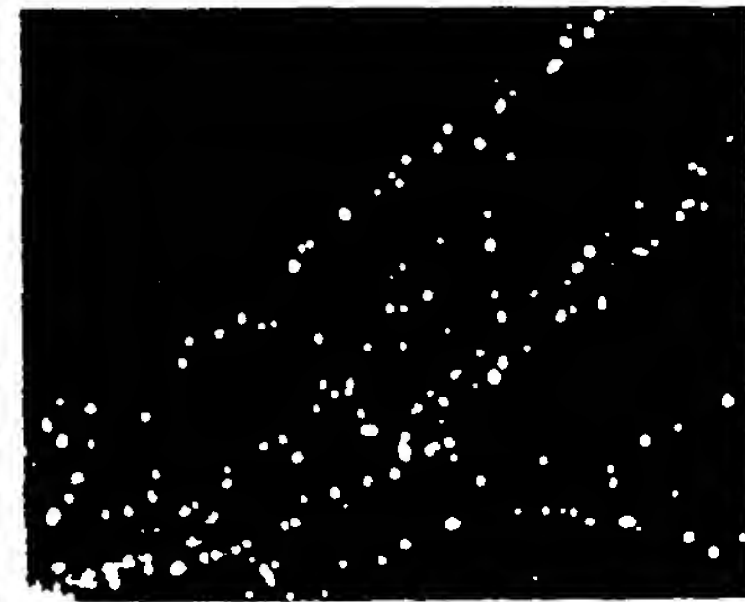


Figure 10G

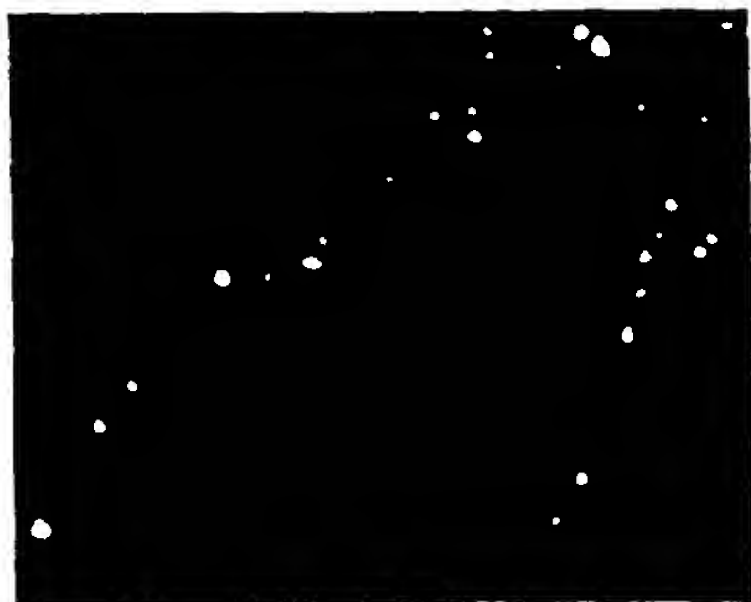


Figure 10H



Figure 10I



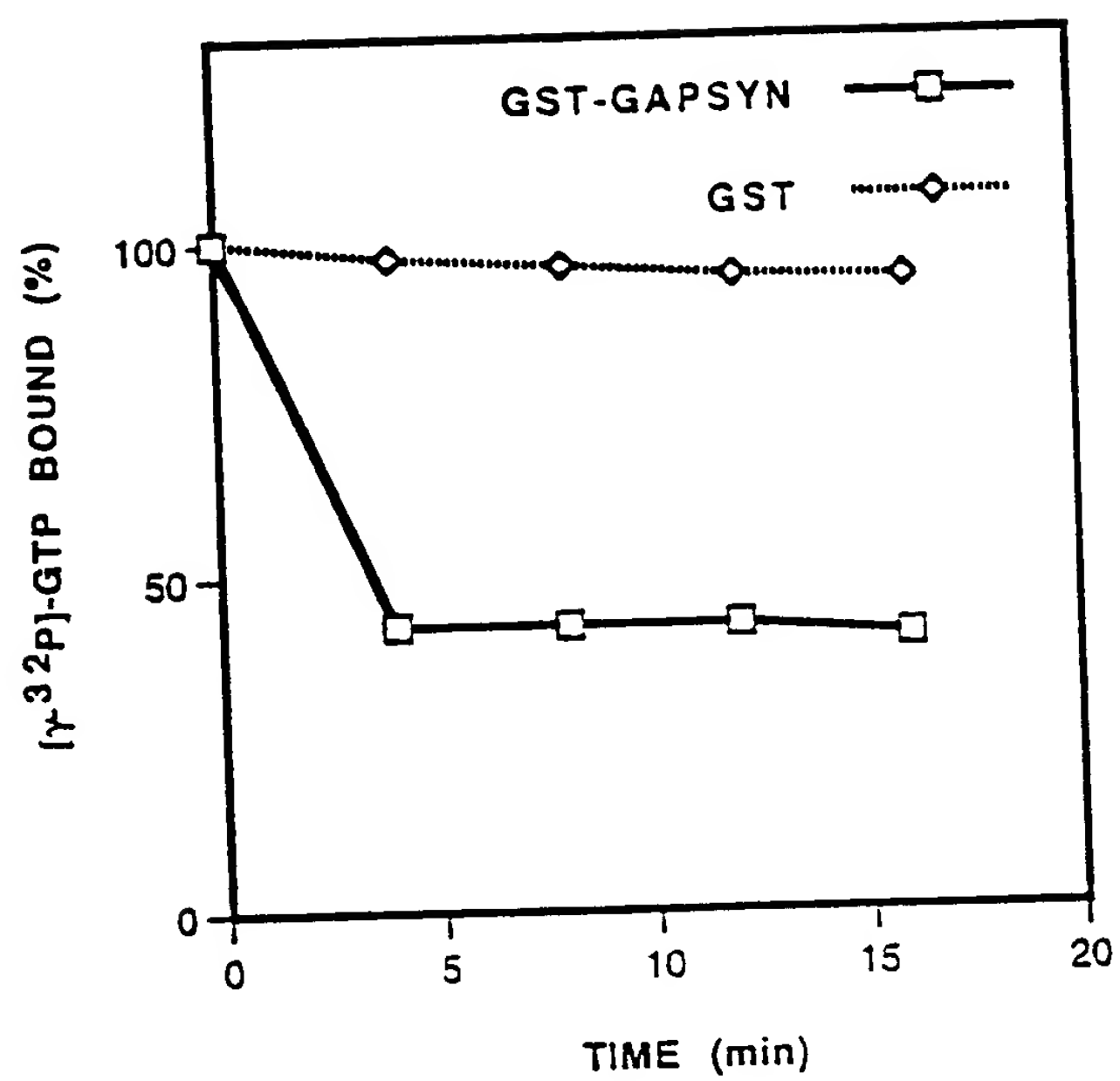


Figure 11